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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,476	09/15/2003	Marc Ferrato	Q77425	9244

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EXAMINER	
BAREFORD, KATHERINE A	

ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/661,476	FERRATO ET AL.	
	Examiner	Art Unit	
	Katherine A. Bareford	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-10 and 12-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Claims 4 and 11 are canceled

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The response and declaration filed April 7, 2006 have been received and entered. No amendment to the claims was provided, so claims 4 and 11 remain canceled and claims 1-3, 5-10 and 12-15 remain present for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3, 5-8, 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schultze et al (US 4460529) in view of Knudsen et al (US 5273699) and the admitted state of the prior art.

Schultze teaches a method of fabricating a substrate that can be an aluminum nitride substrate. Column 1, lines 60-68 and column 2, lines 40-55. The substrate is obtained by spraying a powder onto a support at a high temperature and a high speed. Column 2, line 40 through column 3, line 40 (the plasma spraying). The powder can include AlN grains. Column 2, lines 40-55. Schultze teaches that the process can replace conventional processes such as dry pressing, wet extrusion, slip molding, isostatic pressing, hot pressing, and injection pressing, whereby a ceramic powder is processed and then undergoes high temperature sintering. Column 1, lines 15-35.

Claim 2: the powder can be sprayed by a plasma torch (plasma spraying). Column 3, lines 15-30.

Claim 8: the substrate can be obtained by providing a plurality of passes over the support as a function of the required thickness. Column 5, lines 20-30.

Claim 10: the substrate can be heated after spraying, thus providing the "annealing". Column 4, lines 55-60.

Claim 15: the support can be provided with an "attachment" layer as claimed prior to the thermal spraying. See column 4, lines 30-40 (non-metallic mold cores with al layer of Teflon, for example, can be provided, and without the layer the coating would not apply to the support as the support would be burned up).

Schultze teaches all the features of these claims except (1) the use of the oxide precursor, (2) spraying with an oxyacetylene torch (claim 3), (3) the specific formation of the powder and the materials used (claims 1 and 5-7) and (4) that the substrate can be used as a support for electronic components.

However, Knudsen teaches a method of forming an aluminum nitride powder. Abstract. Knudsen teaches that it is desirable to make the powder moisture resistant by treating with a yttrium containing compound, thus preventing storage problems for the powder. Column 2, lines 5-20 and 35-45. The yttrium compound can be a rare earth oxide precursor, such as yttrium isopropoxide. Column 3, lines 10-20. The compound can be applied to the aluminum nitride powder by (1) dissolving the yttrium compound in an organic solvent forming a solution, (2) then dispersing fine pure AlN powder in the solution with vigorous agitation to form a suspension, (3) then atomizing the suspension in an inert atmosphere (vacuum, for example) to obtain the treated powder. Column 3, line 15 through column 4, line 10 and column 5, line 65 through column 6, line 10. The treated powder can contain yttrium oxide in an amount of 0.1 to 10 % by weight of the aluminum nitride. Column 3, lines 5-15. The solvent can be isopropanol (which would be form of propanol). Column 3, lines 45-50.

The admitted state of the prior art, at page 2 of the specification, indicates that AlN substrates are widely used to support powder electronic components.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Schultze to use the treated aluminum nitride powder as

taught by Knudsen, in order to provide a desirable substrate using a moisture resistant powder, because Schultze teaches the desire to form aluminum nitride articles by plasma spraying aluminum nitride powder, and Knudsen teaches that a desirable moisture resistant aluminum nitride powder can be formed by treating with yttrium oxide precursor. It would have been inherent when plasma spraying such a powder that the oxide precursor would have yielded an oxide, given the high heat of the plasma spraying. It would further have been obvious to modify Schultze in view of Knudsen to use a flame spraying oxyacetylene torch to replace the plasma torch with an expectation of desirable spraying results, because Schultze teaches thermal spraying and it is the Examiner's position that it is well known in the thermal spraying art that plasma and flame spraying with an oxyacetylene torch are both well known desirable methods of thermal spraying. It would further have been obvious to modify Schultze in view of Knudsen to perform routine experimentation to optimize the amount of yttrium oxide content from the range taught by Knudsen of 0.1 to 10% by weight, given the desire to use the best amount for the particular purpose of applicant. It would further have been obvious to modify Schultze in view of Knuden to use yttrium isopropionate as the oxide precursor, with an expectation of desirable protective results, because Knudsen teaches the use of yttrium compounds that convert to oxides (column 3, lines 10-20) and it is the Examiner's position that isopropionates are well known oxide precursor compounds in the chemical art. It would further have been obvious to modify Schultze in view of Knudsen to further use the formed aluminum nitride article as a support for

electronic components as suggested by the admitted state of the prior art in order to provide desirable electronic components, as Schultze in view of Knudsen provides a thin aluminum nitride article, and the admitted state of the prior art teaches the use of formed aluminum nitride articles as supports for electronic components.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schultze in view of Knudsen and the admitted state of the prior art as applied to claims 1-3, 5-8, 10 and 15 above, and further in view of Okano et al (US 5045365).

Schultze in view of Knudsen and the admitted state of the prior art teaches all the features of this claim except the cooling of the support by compressed air while spraying. Schultze does teach that the support can be metal. Column 4, lines 20-35. Schultze also teaches cooling the support during spraying. Column 2, line 65 through column 3, line 5 and column 3, line 65 through column 4, line 10.

However, Okano teaches that when coating an article to be thermally sprayed, the conventional method is to spray compressed air on the back of the substrate surface. Column 3, lines 1-20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Schultze in view of Knudsen and the admitted state of the prior art to use compressed air for cooling as taught by Okano, in order to provide a desirable cooling of the substrate without having to use liquid, because Schultze in view of Knudsen and the admitted state of the prior art teaches the thermal spraying of a

cooled support, and Okano teaches that when thermal spraying a cooled support, a conventional well known method of cooling is by compressed air.

6. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schultze in view of Knudsen and the admitted state of the prior art as applied to claims 1-3, 5-8, 10 and 15 above, and further in view of Dittrich et al (US 3617358).

Schultze in view of Knudsen and the admitted state of the prior art teaches all the features of these claims except the particle formation features and particle sizes.

However, Dittrich teaches making flame spray powders where finely divided material is suspended in liquid, the suspension is atomized and the atomized suspension is dried to form a flame spray powder. Column 1, line 75 through column 2, lines 10. The initial particle sizes can be between 1 and 15 microns. See column 2, lines 5-10 and column 3, lines 40-45. For example, the particle size can be approximately 3 microns. Column 17, lines 60-70. After the atomization and drying, the formed particles can be formed with diameters in the range of 140 mesh to 325 mesh (106 to 45 microns). Column 18, lines 30-45, for example. The formed powder is then screened to use particles of the desired size for spraying, such as 200-325 mesh (75-45 microns). Column 18, lines 55-60. The particles formed can also be hollow. Column 19, lines 5-15.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Schultze in view of Knudsen and the admitted state of the prior art to use initial and final particle sizes, and to use hollow spheres as taught by

Dittrich, in order to provide a thermal spray powder, because Schultze in view of Knudsen and the admitted state of the prior art teaches the thermal spraying of formed AlN powders, with Knudsen teaching a liquid dispersion and spray atomization to form AlN powders, and Dittrich teaches to form liquid dispersions of particles and spray atomize to form thermal spray powders, and that when doing so it is desirable to start with fine powders, such as in the 3 micron size range, which are agglomerated by the spray atomization and drying to form larger particles, such as 45-106 micron in size range, and to further screen the powder to the size desired for thermal spraying. Dittrich further teaches that hollow spheres can be formed, and it would have been obvious to one of ordinary skill in the art that such hollow spheres would also be screened as desired to form a specific coating, given the teaching of Dittrich to screen formed powders to get those desired for thermal spraying.

7. Claims 1-3, 5-8, 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breit et al (US 4460529) in view of Knudsen et al (US 5273699).

Breit teaches a method of fabricating a substrate that can be an aluminum nitride substrate for use as a support for electronic components. Column 2, lines 5-20 and figures 2-3. The substrate is obtained by spraying a powder onto a support at a high temperature and a high speed. Column 4, lines 5-65 (the plasma spraying). The powder can include AlN grains. Column 5, lines 35-50. After the substrate is formed,

circuits, etc. are applied, fired and then the ceramic layer is sealed to exclude moisture. Column 2, lines 25-35.

Claim 2: the powder can be sprayed by a plasma torch (plasma spraying). Column 4, lines 10-65.

Claim 3: other thermal spraying processes can be used. Column 4, lines 10-15.

Claim 8: the substrate can be obtained by providing a plurality of passes over the support as a function of the required thickness. Column 4, lines 35-40.

Claim 10: the substrate can be fired after spraying, thus providing the "annealing". Column 5, lines 1-20 and column 2, lines 25-35.

Claim 15: the support can be provided with an "attachment" layer as claimed prior to the thermal spraying. See column 2, lines 1-10 (the laminate of layers of the substrate).

Breit teaches all the features of these claims except (1) the use of the oxide precursor, (2) spraying with an oxyacetylene torch (claim 3), (3) the specific formation of the powder and the materials used (claims 1 and 5-7).

However, Knudsen teaches a method of forming an aluminum nitride powder. Abstract. Knudsen teaches that it is desirable to make the powder moisture resistant by treating with a yttrium containing compound, thus preventing storage problems for the powder. Column 2, lines 5-20 and 35-45. The yttrium compound can be a rare earth oxide precursor, such as yttrium isopropoxide. Column 3, lines 10-20. The compound can be applied to the aluminum nitride powder by (1) dissolving the yttrium compound

in an organic solvent forming a solution, (2) then dispersing fine pure AlN powder in the solution with vigorous agitation to form a suspension, (3) then atomizing the suspension in an inert atmosphere (vacuum, for example) to obtain the treated powder. Column 3, line 15 through column 4, line 10 and column 5, line 65 through column 6, line 10. The treated powder can contain yttrium oxide in an amount of 0.1 to 10 % by weight of the aluminum nitride. Column 3, lines 5-15. The solvent can be isopropanol (which would be form of propanol). Column 3, lines 45-50.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Breit to use the treated aluminum nitride powder as taught by Knudsen, in order to provide a desirable substrate using a moisture resistant powder, because Breit teaches the desire to form aluminum nitride articles by plasma spraying aluminum nitride powder, and Knudsen teaches that a desirable moisture resistant aluminum nitride powder can be formed by treating with yttrium oxide precursor. It would have been inherent when plasma spraying such a powder that the oxide precursor would have yielded an oxide, given the high heat of the plasma spraying. It would further have been obvious to modify Breit in view of Knudsen to use a flame spraying oxyacetylene torch to replace the plasma torch with an expectation of desirable spraying results, because Breit teaches thermal spraying of various forms can be used and it is the Examiner's position that it is well known in the thermal spraying art that plasma and flame spraying with an oxyacetylene torch are both well known desirable methods of thermal spraying. It would further have been obvious to

modify Breit in view of Knudsen to perform routine experimentation to optimize the amount of yttrium oxide content from the range taught by Knudsen of 0.1 to 10% by weight, given the desire to use the best amount for the particular purpose of applicant. It would further have been obvious to modify Breit in view of Knuden to use yttrium isopropionate as the oxide precursor, with an expectation of desirable protective results, because Knudsen teaches the use of yttrium compounds that convert to oxides (column 3, lines 10-20) and it is the Examiner's position that isopropionates are well known oxide precursor compounds in the chemical art.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breit in view of Knudsen as applied to claims 1-3, 5-8, 10 and 15 above, and further in view of Okano et al (US 5045365).

Breit in view of Knudsen teaches all the features of this claim except the cooling of the support by compressed air while spraying. Breit does teach that the support can be metal. Column 1, lines 60-68.

However, Okano teaches that when coating an article to be thermally sprayed, the conventional method is to spray compressed air on the back of the substrate surface. Column 3, lines 1-20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Breit in view of Knudsen to use compressed air for

cooling as taught by Okano, in order to provide a desirable cooling of the substrate without having to use liquid, because Breit in view of Knudsen teaches the thermal spraying of a metal support, and Okano teaches that when thermal spraying a support, it is conventional to cool the support by compressed air.

9. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breit in view of Knudsen as applied to claims 1-3, 5-8, 10 and 15 above, and further in view of Dittrich et al (US 3617358).

Breit in view of Knudsen teaches all the features of these claims except the particle formation features and particle sizes.

However, Dittrich teaches making flame spray powders where finely divided material is suspended in liquid, the suspension is atomized and the atomized suspension is dried to form a flame spray powder. Column 1, line 75 through column 2, lines 10. The initial particle sizes can be between 1 and 15 microns. See column 2, lines 5-10 and column 3, lines 40-45. For example, the particle size can be approximately 3 microns. Column 17, lines 60-70. After the atomization and drying, the formed particles can be formed with diameters in the range of 140 mesh to 325 mesh (106 to 45 microns). Column 18, lines 30-45, for example. The formed powder is then screened to use particles of the desired size for spraying, such as 200-325 mesh (75-45 microns). Column 18, lines 55-60. The particles formed can also be hollow. Column 19, lines 5-15.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Breit in view of Knudsen to use initial and final particle sizes, and to use hollow spheres as taught by Dittrich, in order to provide a thermal spray powder, because Breit in view of Knudsen teaches the thermal spraying of formed AlN powders, with Knudsen teaching a liquid dispersion and spray atomization to form AlN powders, and Dittrich teaches to form liquid dispersions of particles and spray atomize to form thermal spray powders, and that when doing so it is desirable to start with fine powders, such as in the 3 micron size range, which are agglomerated by the spray atomization and drying to form larger particles, such as 45-106 micron in size range, and to further screen the powder to the size desired for thermal spraying. Dittrich further teaches that hollow spheres can be formed, and it would have been obvious to one of ordinary skill in the art that such hollow spheres would also be screened as desired to form a specific coating, given the teaching of Dittrich to screen formed powders to get those desired for thermal spraying.

10. Kobayashi et al (US 2002/0109152) also teaches an aluminum nitride article formed by thermal spraying as a substrate for electronic components. See figure 2 and paragraph [0051] - [0055].

Response to Arguments

11. Applicant's arguments filed April 7, 2006 have been fully considered but they are not persuasive.

Applicant argues that it would not have been obvious to use Knudsen (in combination with either Schultze or Breit), because the AlN grains of Knudsen, even if they are coated with a yttrium oxide precursor, are not suitable for use in a support for electronic components. The Examiner's attention is directed to the Declaration filed under 37 CFR 1.132 by Alain Petitbon as to this issue. Furthermore, applicant also argues that Knudsen's slurry of AlN powder mixed with a yttrium-containing compound, prior to dispersal in a aqueous medium, cannot be atomized. The Examiner attention is directed to the Declaration filed under 37 CFR 1.132 by Alain Petitbon as to this issue. As to the further rejections of the claims, applicant argues that these rejections do not cure the identified deficiencies of the primary references above.

The Examiner has reviewed these arguments and the declaration filed by Alain Petitbon, however, the rejection is maintained. As to applicant's argument that the AlN grains of Knudsen are not suitable for use in an electronic component, the Examiner disagrees. As discussed at pages 2-3 of the declaration, Mr. Petitbon indicates that the grains of Knudsen are not suitable for use in an electronic component when the particles are dispersed in the aqueous medium as in column 4, lines 1-4. However, it is the Examiner's position, as addressed in the rejections above that the combination of Schultze, Knudsen and the admitted state of the prior art and the combination of Breit and Knudsen would suggest to use the powders of Knudsen formed by dissolving the

yttrium compound in an organic solvent forming a solution, then dispersing AlN powder in the solution with vigorous agitation, then removing the solvent from the slurry by a process such a spray drying to form a dry treated powder (see column 3, line 15-68). Knudsen teaches that the treated aluminum nitride powder "may" be dispersed in an aqueous medium to make ceramic articles as a use of this powder (see column 4, lines 1-15 and column 2, lines 35-65 - where the first embodiment is simply making powders and the second, another, embodiment is directed to making the powders and then dispersing them in the aqueous medium). Thus, it is the formed treated powders that are suggested to be used for spraying of the powder as provided by Schultze and Breit. See the discussion of the combination of references provided in the rejections above. Therefore, Mr. Petitbon's conclusions about the effect of the water on the particles of Knudsen does not affect the combination provided by the Examiner, as this combination does not provide the use of a water dispersed AlN particle.

As to applicant's arguments that the Knudsen slurry cannot be atomized, the Examiner disagrees. As discussed at pages 3-4 of the declaration, Mr. Petitbon indicates that the Knudsen organic slurry cannot be atomized because it does not contain any agent to stabilize the slurry up to the point of atomization. The Examiner notes that as to the scope of this requirement indicated in the declaration as compared to the scope of the claims, the claims of the present invention do not indicate any requirement of stabilizers. Moreover, Knudsen specifically teaches that powders can be provided from the slurry by spray drying (column 3, lines 64-68) which is a process that would provide

atomizing (as is shown in detail in Dittrich). Even if it is considered that spray drying would require stabilizers, given the specific teaching by Knudsen that spray drying is possible, the Examiner would understand that the organic slurry Knudsen would have such stabilizers (or at least would have such ingredients as needed to provide spray drying). It is noted that although Knudsen teaches that the slurry "preferably consists essentially of solvent, the yttrium-containing compound, and the aluminum nitride powder" (column 3, lines 55-60), this is a preferred option, and the slurry is not limited to containing only those ingredients. See MPEP 2123 as to this issue. As to the plasma spraying powder size requirements and hollow sphere requirements discussed by Mr. Petitbon, this is not commensurate in scope with the claims. The broad claims make no such requirements, and in fact such requirements are made in claims 13-14 where they have been addressed by the Examiner with the further addition of Dittrich. Since the dependent claims must be further limiting, parent claim 1, for example, would specifically not require that size or the use of hollow spheres. As worded in the parent claims, whatever powders are produced can be further processed (by grinding or screening, for example) to provide powders capable of being sprayed as suggested by Schultze and Breit and still meet all the features of the claims. Note for example, that applicant's own claim 14 provides for screening the atomized powder to find a desired size.

Conclusion

12. \THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:00-3:30) with the First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Other inquiries can be directed to the Tech Center 1700 telephone number at (571) 272-1700.

Furthermore, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kath A B

KATHERINE BAREFORD
PRIMARY EXAMINER